

AUTOMATIC OPENING AND CLOSING DEVICE FOR VEHICLE SLIDE DOOR

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Abstract

PROBLEM TO BE SOLVED: To prevent a slide door opened to a fully opened position from going over a movement inhibiting mechanism and falling down by stopping and controlling a driving source to decrease a transmission keeping force of an electromagnetic clutch when it is detected that the slide door arrives at the fully opened position, and releasing the clutch after the clutch is controlled to a half-clutch state for a constant time.

SOLUTION: When a full open detecting switch 24 is made on, a control circuit in a slide controlling device 11 detects the action to stop a rotation of an opening and closing motor 12f. Then, the control circuit controls a transistor at the time after a constant time passed and supplies an intermediate electric potential between a clutch connection potential and a release potential to an electromagnetic clutch 12e to make to a half-clutch state. Thereby, during stopping of a vehicle on a downward slope, even in the case where the slide door 3 stops at a full open position, since a drive pulley 12a is connected to an opening and closing motor 12f at stopping through the electromagnetic clutch 12e at a half-clutch state, braking can be applied to the slide door 3 being about to falling down toward a closing direction by a tare weight.

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